

# Animals for Research

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## If Cats and Dogs Were Bred for Laboratory Medicine Would Benefit and Pets Be Safe

By Joshua Lederberg

**Science and Man**

A LOT OF ENERGY needed for more important problems is spent on the set battle of antivivisectionists (AVs) versus medical researchers (MRs). We can see more emotion than reason on both sides. The AVs paint sadistically obscene pictures of the mad doctor torturing the household pet. The MRs see themselves as noble knights attacking death and suffering, unable to do wrong, and equally unable to tolerate any supervisory regulation of their heroic fight against disease.

The ultimate issue has a practical solution cheaper than what it costs to continue the battle for principle. Everyone loses now, since pets and humans alike benefit from research on animals. Medical research should have the support, not the antagonism, of many involved in the AV movement.

So long as there is a market for stray cats and dogs, there is always the possibility of abuse. One way of undercutting the market is via the public pound. But the pound still leaves the chance that someone bereaved by loss of a beloved pet will resent the possibility of its turning up as an experimental animal.

The fundamental interests of pet lovers and medical researchers are really very close. Medical research would benefit in precision and in the reproducibility of experiments if it used only selected types of felines and canines especially bred for the purpose. For the past 40 years, the laboratory mouse has been the standard animal for experimental research, with enormous benefits in such fields as organ transplantation, viruses, immunology, blood disease and metabolism. Our most penetrating information about the behavior of organ grafts would have been impossible to obtain without careful genetic control from long-range inbreeding of mouse strains.

FOR CERTAIN WORK, however, mice are unsuitable or inadequate, and larger animals, such as cats and dogs, are used. If carefully selected, inbred lines of canines and felines were developed, we could expect much greater reliability in the results of work on drug safety, developmental anomalies, behavior and surgical transplantation.

These genetically pure lines should not be confused with the cat and dog breeds now valued as house pets and even less with the strays, which besides their dubious heredity may have had cruel handling (to influence their behavior in psychological tests) and infectious diseases (to confound their response to drugs and vaccinations).

The purebred research animals, however, must somehow be provided to the in-

vestigators who need them. Since the Federal Government is so deeply involved in medical research through funding academic work, and through regulating commercial drug work, it must be directly involved in satisfying these needs. Hitherto we have had no systematic studies on this issue, though some are in process. Scavenging animals with unknown histories from the streets — animals with the possible stigma of having been stolen — seems an incongruous way to get experimental material which must later be subject to the most scrupulous observation and, for the most useful findings, ideal care.

A bill to combat theft of pets and provide humane treatment of animals in research has been passed by Congress and sent to the White House for the President's signature. Although AV groups probably would look with suspicion at any postponement of action on the bill, the legislation ought to be delayed until more comprehensive measures can be worked out. Unfortunately, these will cost money, which makes it hard to rectify the system at this time. The major steps, similar to proposals started by Sen. Lister Hill (D-Ala.), would be:

1. Studies of animal needs and farming systems which could fulfill them efficiently.

2. Provision of funds through the facilities program of the National Institutes of Health for the capital costs of more adequate animal care at research centers, and, if necessary, for the canine/feline farms.

3. Prohibition of the routine use in drug testing or other research of any domes-

tic cats and dogs other than those bred for the purpose. (Exceptions must be made for special animals, such as any that might carry unique hereditary characteristics or diseases.) The regulatory parts of the new bill could be adapted for this purpose, of course.

Medical research can only benefit from the use of animals of well defined strains, bred under controlled conditions of nutrition and custody. In the future we will need more kinds of animals to meet specialized needs not only for research, but possibly in medical practice also. In fact, this is already the case for certain kinds of tissues needed for hormone production, and for growing certain viruses.

So we should learn how to organize the appropriate kind of farming, whether as free enterprise or with centralized contracts. Research will also benefit by being uncoupled from anxieties about pets. Present regulations and traditions are quite effective, and abuses really quite rare in the treatment of research animals — it is children, not scientists, who sometimes enjoy inflicting pain. If there is still a problem worthy of Congressional attention, this can be attacked much more realistically when the family pet is not involved.

This farm program, of course, will cost some tax money. If any of it is not fully justified by the scientific benefits, it could be charged to other agricultural subsidies.

The replacement of hunting by husbandry is a universal landmark of human civilization.

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